

Operating instructions

Electromagnetic Air Pump

52194, 52195

wiltec



Illustration similar, may vary depending on model

Please read and follow the operating instructions and safety information prior to initial operation.

Technical changes reserved!

Illustrations, functional steps, and technical data may deviate insignificantly due to continuous further developments.



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To return your goods for exchange, repair, or other purposes, please use the following address. Attention! To allow for a trouble-free complaint or return, it is important to contact our customer service team before returning your goods.

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Introduction

Thank you for choosing to purchase this quality product. To minimise the risk of injury, we ask you to always take some basic safety precautions when using this product. Please read this operating manual carefully and make sure that you understand it.
Keep these operation instructions in a safe place.

Safety information

The following symbols, indicating typical safety-related features of the product, must be observed without fail during use.



Caution! Danger of electric shock!



Caution! Hot surface!

Electric safety

- Make sure that the existing mains voltage and frequency match the specifications on the name-plate of the device.
- Avoid operating the pump with damaged cables or plugs. Only authorised qualified persons should perform repair works.
- Before carrying out any maintenance or cleaning, disconnect the mains plug from the socket.
- To avoid the risk of electric shock, do not expose the pump to contact with water or other liquids.
- Use only isolated sockets and ground fault circuit interrupters (FI switches) to ensure additional safety.

Installation and operation

- Place the pump in a dry, well-ventilated location, avoiding direct sunlight or humid environments.
- Always place the pump horizontally to ensure stable operation.
- Keep the pump away from flammable objects and sources of ignition.
- The exterior of the pump may become hot during operation. To avoid burns, do not touch the pump until it has cooled down completely.
- The pump being installed below the surface of the liquid, a non-return valve must be used to prevent damage from backflow.

Cleaning and maintenance

- Clean the inlet filter regularly to avoid blockages that can affect performance.
- Replace damaged or heavily soiled filters in good time.
- Unplug the air pump and wait for it to cool before touching it. If a problem occurs, have it checked and repaired by a qualified technician.
- We recommend that the users not repair the device themselves if they are not qualified to do so. No responsibility is accepted for damage caused by improper maintenance or repair.

Storage and transport

- Handle the pump with care to avoid impact or damage. Store the pump in a dry place and away from corrosive substances.
- Avoid extreme temperatures (below 0 °C or above 40 °C) during storage.



Instructions of use

- Only use the device according to the intended use defined in this manual. Misuse can cause damage and be dangerous.
- Switch off the pump and disconnect it from the power supply when it is not in use.
- Keep the pump out of children's reach. Use of this product is restricted to persons familiar with its use and the associated safety instructions.

Functional principle

When the two opposing magnetic coils are connected to the AC power supply, a magnetic field is created. The magnetic base drives the seal so that a continuous pivoting movement can occur under the effect of the magnetic field. During this movement, the space between the seal and air chamber changes continuously, emitting a continuous stream of air by opening and closing the inlet and outlet valves.

Product features

- The product uses the principle of a piston machine to directly drive the membrane to generate compressed air, resulting in low energy consumption and high efficiency.
- The air pump does not need to be refilled. High-pressure air supply is environmentally friendly.
- The device is compact and unique in design. It uses a high-quality, thicker aluminium-alloy casing and a floating damping system. It has a multi-level, sound-absorbing design, minimising the noise and vibrations of the air pump.
- The specific power of the electromagnetic air pump is about one-fifth of that of the conventional air pump, which clearly reflects the effect of energy saving.
- The air pump is designed to be characterised by internal heat radiation and high water resistance; the temperature of the operating environment can be 0 °C–+40 °C, the humidity 45–65 %. The maximum altitude for using the air pump is 1000 m.

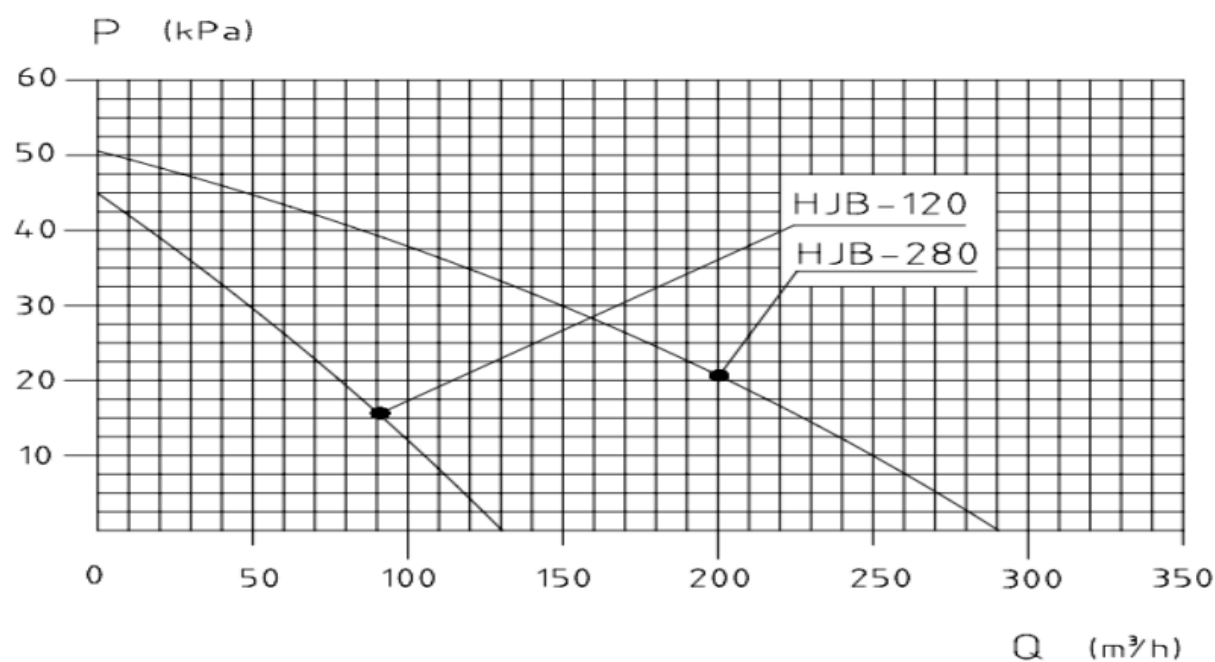
Use

1. Do not use the air supply until the machine has been in operation for 10 min.
2. The voltage may fluctuate within ± 10 % of the specified voltage under normal use.
3. Place the air pump so that it is about 30 cm above the liquid surface. If it is installed below the surface of the liquid, add a non-return valve with a good sealing effect.
4. Set up the air pump in a well-ventilated place and in a horizontal position. It must not be at an angle.
5. Avoid impacts and keep the pump away from combustible objects (liquids, oil, gas, solids) as well as hazardous substances and ignition sources.
6. Set the starting pressure of the air pump within the nominal pressure. Please refer to the type plate for the scope of delivery.
7. Regularly clean the inlet filter. Clean and replace it in good time. You can check the filter by opening the inlet cover.
8. Do not touch the device with hands or other parts of the body when the air pump is running.

Technical specifications

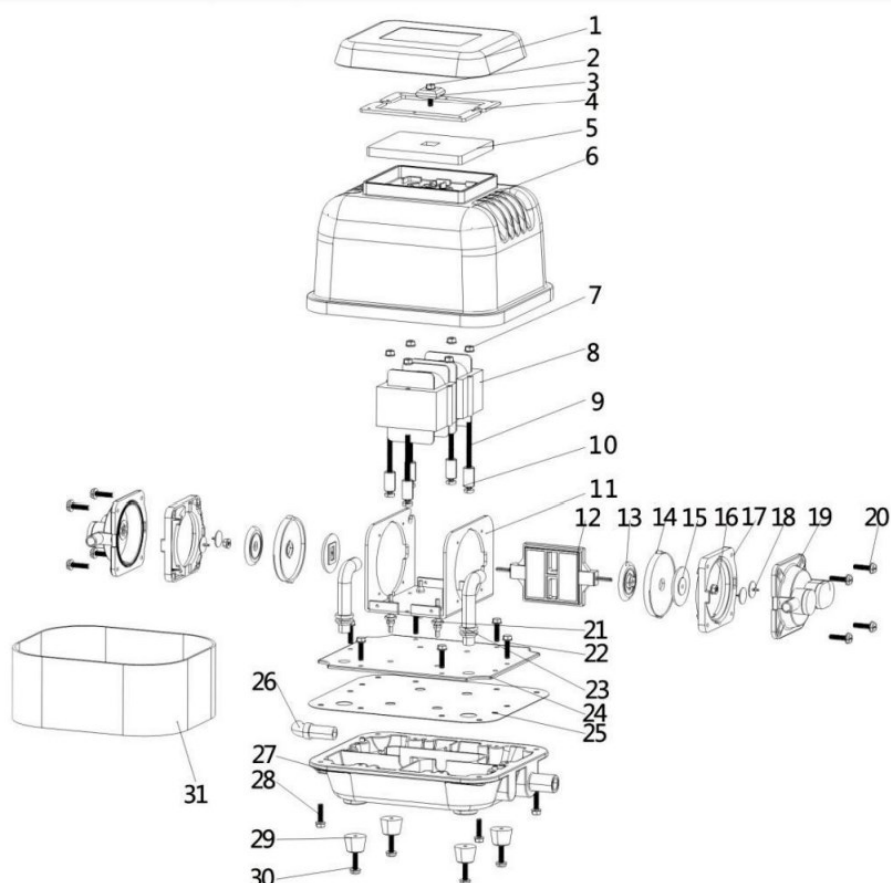
Item number	Voltage (V)	Max. power (W)	Nominal pressure (kPa)	Nominal flow rate ($\frac{l}{min}$)	Max. pressure (kPa)	Max. flow rate ($\frac{l}{min}$)	Sound level (dB (A))	Dimensions (mm)
52194	220–240	80	15	90	45	120	< 45	250 × 180 × 200
52195		200	20	200	50	280	< 48	250 × 180 × 200

Power chart



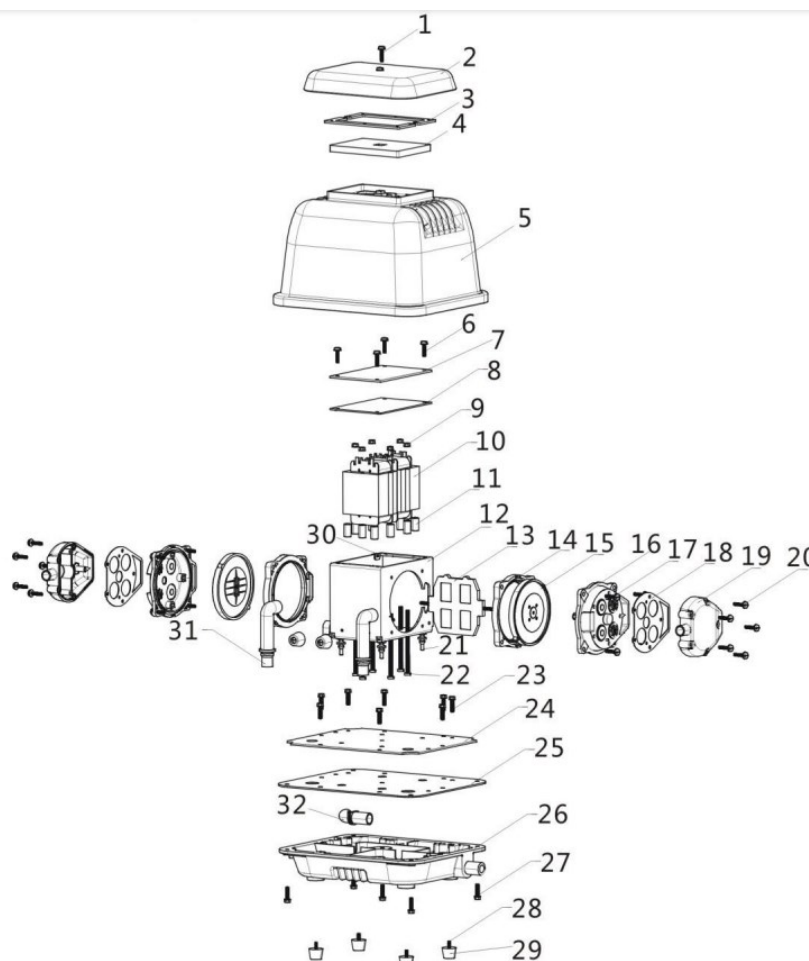
Exploded view

52194



No	Part	No	Part
1	Inlet cover	17	Membrane holder
2	Screw M5×20	18	Valve
3	Inlet cover plate	19	Air chamber
4	Frame to 1	20	Screw M4×20
5	Sound-absorbing sponge for inlet	21	Shock-absorbing feet
6	Housing, upper part	22	M5×15 hex bolt
7	M5 hex nut	23	Outlet tube
8	Rotor	24	Base plate mat
9	Screw M5×70	25	Base plate
10	Rotor feet	26	Base outlet
11	Rotor holder	27	Housing, lower part
12	Magnetic foot	28	M5×20 hex bolt
13	Membrane disk 2	29	Feet
14	Diaphragm	30	Screw M4×14
15	Membrane disk 1	31	Lateral cover
16	M4 hex nut		

52195



No	Part	No	Part
1	M6×30 stainless steel screw	17	M4×30 pan-head screw
2	Entry cover	18	Support to 16
3	Frame to 2	19	Cover to 16
4	Sound-absorbing sponge for inlet	20	Screw M4×25
5	Housing, upper part	21	Absorbing feet
6	M5×70 pan-head screw	22	M5×98 full-thread lens screw
7	Spindle holder cover	23	M4×10 pan-head screw
8	Frame to 7	24	Base plate mat
9	M5 nylon locknut	25	Base plate frame
10	Spindle	26	Base panel
11	Spindle support ring	27	M4×14 hex bolt
12	Spindle holder	28	M4×14 flange screw
13	Magnetic foot	29	Feet
14	Membrane	30	Screw
15	Membrane base	31	Air chamber outlet
16	Air chamber	32	Base outlet



Transporting and storing the device

- Do not install the pump at an angle.
- Handle with care, avoid collisions and impacts, and do not place near acids and other corrosive substances.
- The transport and storage environment must be sufficiently ventilated and dry.
- The temperature of the storage environment must be below 50 °C, and the humidity must be below 65 %.
- Keep away from ignition sources and protect from severe weather and contamination.

Maintaining and repairing

- Clean the inlet filter every 30 days or replace it if it is very dirty.
- Replace the seal and valve every 18 months for optimal performance.
- To avoid damage or safety hazards, only allow qualified specialist personnel to carry out maintenance and repair work.

Error handling table

Problem	Possible cause	Proposed solution
Reduction in pressure and flow	Blocked inlet filter	Clean or replace filter.
	Excessive pneumatic resistance	Readjust pressure.
	Insufficient power supply voltage	Adjust power supply voltage.
Increased noise emission	Defective valve	Replace valve.
	Damaged connection pipe or interrupted pipe connection	Reattach or replace connection pipe.
Air pump not working	Open circuit	Repair or replace the circuit components.
	Thermal protection triggered by excessive temperature	Adjust operating mode, select a cooler and better ventilated location.

Regulations for waste disposal

The Waste Electrical and Electronic Equipment Directive (WEEE Directive, 2012/19/EU) of the EU was implemented in the German law related to electrical and electronic equipment and appliances.

All WilTec electric devices that fall under the WEEE directive are labelled with the symbol of a crossed-out wheeled rubbish bin. This symbol indicates that this electric device must not be disposed of with the domestic waste.

WilTec Technik GmbH is registered with the German registration authority EAR (Stiftung Elektro-Altgeräte Register) under the WEEE-registration number DE45283704.

Disposal of used electrical and electronic devices (intended for use in the countries of the European Union and other European countries with a separate waste collection system for these devices).

The symbol on the packaging or the product itself indicates that this product must not be treated as normal domestic waste but must be disposed of at a recycling collection station for electrical and electronic waste.

By disposing of this product correctly, you contribute to the protection of the environment and the health of your fellow people. Inappropriate disposal threatens the environment and health.



Material recycling helps to reduce the consumption of raw materials.

Additional information about the recycling of this product can be provided by your local commune, the municipal waste disposal facilities, or the store where you purchased the product.

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